

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: : PATENT  
PAUL M. McELFRESH, et al. :  
Serial No.: 09/400,812 : Group Art Unit: 1721  
Filed: September 22, 1999 : Examiner: P. Tucker  
For: HYDRAULIC FRACTURING USING : Docket No.: 304-15027-US  
NON-IONIC SURFACTANT : Date: February 17, 2000  
GELLING AGENT :

#4/a  
3/2/00  
PC

AMENDMENT UNDER 37 CFR §1.111

Box Non-Fee Amendment  
Assistant Commissioner for Patents  
Washington, D.C. 20231

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Sir:

In reply to the Office Action dated January 21, 2000, setting a shortened statutory period for response of three months in the above-cited case, please enter the following amendment.

In the Claims

Please amend claim 1 as follows:

- A' SUB B' /
1. (Amended) A method for treating a subterranean formation comprising:  
providing an aqueous viscoelastic treating fluid having:  
an aqueous base fluid; and  
a non-ionic amine oxide surfactant gelling agent as the only  
gelling agent employed;  
injecting the aqueous viscoelastic surfactant treating fluid through a  
wellbore and into the subterranean formation; and

A<sup>1</sup>  
contd

treating the subterranean formation under conditions effective to do  
so.--

Please cancel claims 2 and 3 as redundant.

Please amend claim 8, line 12, by deleting the phrase "easily removed".

Please amend claims 9 as follows:

9. (Amended) The method of claim 1 further comprising  
breaking the gel of the aqueous viscoelastic treating fluid by a  
mechanism selected from the group consisting of contact with a  
hydrocarbon, contact with alkoxyated alcohol solvents,  
[dilution,] and contact with at least one <sup>agent</sup> [reactive agent] reactive  
with the gel.--

A<sup>2</sup>

10. (Amended) An aqueous viscoelastic treating fluid comprising:  
an aqueous base fluid; and  
a non-ionic amine oxide surfactant gelling agent in the absence of  
another gelling agent.<sup>4</sup>

SUB  
B2

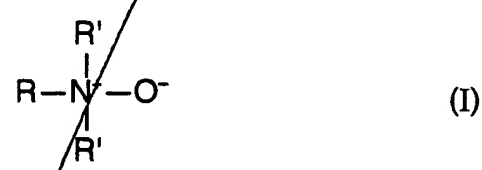
Please cancel claims 11 and 12 as redundant.

Finally, please amend claim 17 as follows:

17. (Amended) An aqueous viscoelastic treating fluid comprising:  
an aqueous base fluid; and  
a non-ionic amine oxide surfactant gelling agent having the formula:

A<sup>3</sup>

SUB  
B3



where R is an alkyl or alkylamido group averaging from about 8  
to 24 carbon atoms and R' are independently alkyl groups  
averaging from about 1 to 6 carbon atoms, and